

REMARKS

The Office action dated August 6, 2010 has been carefully reviewed and the foregoing amendment has been made for reasons independent of patentability.

Status of the Claims

Claims 46-93 are currently pending. Claims 46-52, 55, 59, 64-71, 73, and 77-86 are rejected. Claims 53, 54, 56-58, 60-63, 72, 74-76, and 87-93 are objected to. Claims 1-45 have been canceled.

Interview Summary

Applicants thank Examiner Brown for the telephonic interview conducted on September 2, 2010 with Applicants' representatives Jason Conway and Lucas Wenthe to discuss differences between Applicants' Claimed invention and cited references. No agreement was reached.

Allowable Subject Matter

Applicants acknowledge the Examiner's indication that Claims 53, 54, 56-58, 60-63, 72, 74-76, and 87-93 are allowed.

Rejection Under 35 U.S.C. § 112

The rejection of Claims 46-65, 79, and 80 under 35 U.S.C. § 112, second paragraph, for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is respectfully traversed.

Claims 46 and 79 have each been amended to more clearly describe the present invention, and to address the rejection in the Office action. More specifically, Claims 46 and 79 have each been amended to recite "a base section adapted to be coupled to a trunk of the patient" as suggested by the Examiner. For at least this reason, Applicants respectfully submit that Claims 46 and 79 satisfy the requirements of 35 U.S.C. §112.

Claims 47-65 depend from independent Claim 46 and Claim 80 depends from independent Claim 79. When the recitations of dependent Claims 47-65 and 80 are considered in combination with the recitations of Claim 46 and Claim 79 respectively, Applicants submit that Claims 47-65 and 80 likewise satisfy the requirements of 35 U.S.C. §112

For at least the reasons set forth above, Applicants respectfully request that the Section 112, second paragraph, rejection of Claims 46-65, 79, and 80 be withdrawn.

Rejection Under 35 U.S.C. § 102

The rejection of Claims 46-53, 55, 64-71, and 77-86 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,417,643 to Taylor (hereinafter referred to as “Taylor”) is respectfully traversed.

Taylor describes a passive motion device (10) including a motivator assembly (18) attached to a chair (12). Motivator assembly (18) includes an elevation drive unit (20) mounted to a support bracket (22) and a rotation drive unit (30) connected to elevation pivot arms (28). Elevation drive unit (20) is configured to move a patient's arm from a position in which an upper arm lies at a patient's side to a position approximately overhead. Notably, Taylor does not describe or suggest a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes a base section adapted to be coupled to a trunk of the patient, an upper arm section is configured to rotate with respect to the base section about a connection positionable near an armpit of the patient, and a drive assembly operatively coupled to the upper arm section.

Claim 46 recites a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient. The shoulder orthosis comprises “a base section adapted to be coupled to a trunk of the patient . . . an upper arm section rotatably coupled to the base section at the proximal end portion for receiving the upper portion of the arm, such that the upper arm section is configured to rotate with respect to the base section about a connection positionable near an armpit of the patient; and a drive assembly operatively coupled to the upper

arm section, and movable with respect to the upper arm section to rotate a humerus bone in the upper portion of the arm relative to a scapula bone at the shoulder joint.”

Taylor does not describe or suggest a shoulder orthosis as recited in Claim 46. More specifically, Taylor does not describe or suggest a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes a base section adapted to be coupled to a trunk of the patient, an upper arm section is configured to rotate with respect to the base section about a connection positionable near an armpit of the patient, and a drive assembly operatively coupled to the upper arm section. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 46 is patentable over Taylor.

Claims 47-53, 55, 64, and 65 depend from independent Claim 46. When the recitations of Claims 47-53, 55, 64, and 65 are considered in combination with the recitations of Claim 46, Applicants submit that dependent Claims 47-53, 55, 64, and 65 likewise are patentable over Taylor.

Claim 66 recites a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient. The shoulder orthosis comprises “an upper arm section for receiving the upper portion of the arm; a lower arm section for receiving a lower portion of the arm and maintaining the lower portion of the arm substantially orthogonal to the upper portion of the arm; a base section adapted to be coupled to a trunk of the patient, the base section having a proximal end portion and a distal end portion, the upper arm section rotatably coupled to the base section near the proximal end, such that the upper arm section is configured to move with respect to the base section about a connection positioned near an armpit of the patient; and a drive assembly operatively coupling the lower arm section to the upper arm section, and movable with respect to the upper arm section to rotate a humerus bone in the upper portion of the arm relative to a scapula bone at the shoulder joint of the patient.”

Taylor does not describe or suggest a shoulder orthosis as recited in Claim 66. More specifically, Taylor does not describe or suggest a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes an upper arm

section, a lower arm section, and a base section adapted to be coupled to a trunk of the patient such that the upper arm section is configured to move with respect to the base section about a connection positioned near an armpit of the patient. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 66 is patentable over Taylor.

Claims 67-71, 77, and 78 depend from independent Claim 66. When the recitations of Claims 67-71, 77, and 78 are considered in combination with the recitations of Claim 66, Applicants submit that dependent Claims 67-71, 77, and 78 likewise are patentable over Taylor.

Claim 79 recites an orthosis for effecting rotation of a limb relative to a joint of a patient. The orthosis comprises “a base section adapted to be coupled to a trunk of the patient, the base section having a proximal end portion and a distal end portion; a first section rotatably coupled to the base section at the proximal end portion for receiving a proximal portion of the limb, such that the upper arm section is configured to move with respect to the base section about a connection positioned near an armpit of the patient; and a drive assembly . . . to rotate a bone relative to the joint of the patient.”

Taylor does not describe or suggest an orthosis as recited in Claim 79. More specifically, Taylor does not describe or suggest a shoulder orthosis for effecting rotation of a limb relative to a joint of a patient that includes a base section adapted to be coupled to a trunk of the patient and a drive assembly operatively coupled a first section of the orthosis to rotate a bone relative to a joint. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 79 is patentable over Taylor.

Claim 80 depends from independent Claim 79. When the recitations of Claim 80 are considered in combination with the recitations of Claim 79, Applicants submit that dependent Claim 80 likewise is patentable over Taylor.

Claim 81 recites a method for assembling a shoulder orthosis. The method comprises “configuring an upper arm section for receiving the upper portion of the arm; configuring a

lower arm section for receiving a lower portion of the arm to maintain the lower portion of the arm substantially orthogonal to the upper portion of the arm; configuring a base section to a trunk of the patient, the base section having a proximal end portion and a distal end portion; rotationally coupling the upper arm section to the base section at the proximal end portion, such that the upper arm section is configured to move with respect to the base section about a connection positionable beneath an armpit of the patient; and operatively coupling the lower arm section to the upper arm section with a drive assembly that is movable with respect to the upper arm section to rotate a humerus bone in the upper portion of the arm relative to a scapula bone at the shoulder joint of the patient.”

Taylor does not describe or suggest a method for assembling a shoulder orthosis as recited in Claim 81. More specifically, Taylor does not describe or suggest a method for assembling a shoulder orthosis that includes configuring a base section to a trunk of the patient and rotationally coupling an upper arm section to the base section, such that the upper arm section is configured to move with respect to the base section about a connection positionable beneath an armpit of the patient. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 81 is patentable over Taylor.

Claims 82-86 depend from independent Claim 81. When the recitations of Claims 82-86 are considered in combination with the recitations of Claim 81, Applicants submit that dependent Claims 82-86 likewise are patentable over Taylor.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 46-53, 55, 64-71, and 77-86 be withdrawn.

Rejection Under 35 U.S.C. § 103

The rejection of Claims 59 and 73 under 35 U.S.C. § 103(a) as being unpatentable over Taylor in view of U.S. Patent No. 5,645,521 to Hepburn et al., (hereinafter referred to as “Hepburn”) is respectfully traversed.

Taylor is described above.

Hepburn describes a shoulder therapy device 10 for providing varying amounts of stress or tension at an elbow and shoulder during physical therapy including a forearm strut 12 coupled to a telescoping upper arm strut 16 via a spring tensioning device 35. Therapy device 10 also includes a back support base 21 coupled to a protractor gauge 20. Tensioning device 35 includes a spring 36 attached to a nose element 38, which bears on a cam surface 39, and a screw 33, which abuts a plunger 37. Turning screw 33 creates compression of spring 36 to exert a one way tension. Notably, Hepburn does not describe or suggest a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes a base section adapted to be coupled to a trunk of the patient, an upper arm section is configured to rotate with respect to the base section about a connection positionable near an armpit of the patient, and a drive assembly operatively coupled to the upper arm section.

Claim 59 depends from independent Claim 46, which is recited above.

No combination of Taylor and Hepburn describe or suggest a shoulder orthosis as recited in Claim 46. More specifically, no combination of Taylor and Hepburn describes or suggests a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes a base section adapted to be coupled to a trunk of the patient, an upper arm section is configured to rotate with respect to the base section about a connection positionable near an armpit of the patient, and a drive assembly operatively coupled to the upper arm section. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient, and Hepburn describes a shoulder therapy device that includes a tensioning device for providing varying amounts of stress or tension at an elbow and shoulder during physical therapy. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 46 is patentable over Taylor in view of Hepburn.

When the recitations of Claim 59 are considered in combination with the recitations of Claim 46, Applicants submit that dependent Claim 59 likewise is patentable over Taylor in view of Hepburn.

Claim 73 depends from independent Claim 66, which is recited above.

No combination of Taylor and Hepburn describe or suggest a shoulder orthosis as recited in Claim 66. More specifically, no combination of Taylor and Hepburn describes or suggests a shoulder orthosis for effecting rotation of an upper portion of an arm relative to a shoulder joint of a patient that includes an upper arm section, a lower arm section, and a base section adapted to be coupled to a trunk of the patient such that the upper arm section is configured to move with respect to the base section about a connection positioned near an armpit of the patient. Taylor describes a passive motion device that is attached to a chair and not coupleable to a trunk of a patient. Accordingly, for at least the reasons above, Applicants respectfully submit Claim 66 is patentable over Taylor in view of Hepburn.

When the recitations of Claim 73 are considered in combination with the recitations of Claim 66, Applicants submit that dependent Claim 73 likewise is patentable over Taylor in view of Hepburn.

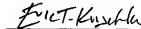
For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 59 and 73 be withdrawn.

Conclusion

In view of the foregoing amendment and remarks, all the Claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

The Commissioner is authorized to charge Deposit Account No. 01-2384 for any fees incurred during the pendency of this application.

Respectfully submitted,



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